UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
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ATLANTA GEORGIA 30303-8960

June 4, 2010

Ms. Jennifer Harris, P.E.
North Carolina Turnpike Authority
5400 Glenwood Avenue, Suite 400
Raleigh, North Carolina 27612

SUBJECT: Federal Draft Environmental Impact Statement for the Mid-Currituck Bridge Study, Currituck and Dare Counties, North Carolina; TIP Project No.: R-2576; FHW-E40830-NC; CEQ No.: 20100116

Dear Ms. Harris:

The U.S. Environmental Protection Agency Region 4 (EPA) has reviewed the subject document and is commenting in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA. The North Carolina Turnpike Authority (NCTA), a division of the North Carolina Department of Transportation (NCDOT), and the Federal Highway Administration (FHWA) are proposing to construct a new multi-lane, 7 to 7.5-mile bridge and access roads and interchanges across Currituck Sound between US 158 in Currituck County and NC 12 in Dare County. There are five alternatives being considered with two hurricane evacuation improvement options and two mainland bridge approach options. NCTA and FHWA also studied an 'improve existing' roadway alternative (i.e., ER2) at the request of numerous State and Federal agencies.

The NCTA and FHWA are utilizing the agency coordination process under SAFETEA-LU Section 6002. The new bridge alternatives are proposed as a toll facility. The existing roads alternative that was studied in the DEIS (i.e., ER2) is not currently funded. EPA provided detailed project scoping comments, conceptual alternatives refinement report comments, and statement of purpose and need and alternatives screening report comments to the NCTA in letters dated August 3, 2007, December 14, 2007, and May 5, 2008, respectively.

EPA's primary environmental concerns regarding the Clean Water Act remain unresolved. Detailed technical review comments are attached (See Attachment A).

EPA has rated the proposed bridge alternatives MCB2 and MCB4 as 'EO-2', Environmental Objections with additional information being requested for the final document (Attachment B includes EPA's Summary of Rating Definitions and Follow-up Action. EPA's review has identified: significant environmental impacts to jurisdictional waters of the U.S. that should be avoided in order to adequately protect the environment, potential degradation of water quality to Currituck Sound, severe impacts to fish and wildlife resources, and indirect and cumulative effects within the project study area. Further, we believe that the proposed action might cause significant environmental degradation under the Clean Water Act and Section 404(b)(1) Guidelines.

NCTA and FHWA need to further demonstrate that the environmental impacts to jurisdictional waters of the U.S. can be further avoided and minimized and potentially mitigated for and that water quality is not further degraded as a direct result of this project and its associated indirect and cumulative impacts. NCTA and FHWA should consider substantial changes to the recommended alternative or consideration of some other project alternative, including the improvement to existing roadway facilities. Alternative MCB2/C1/A might be environmentally acceptable provided that impacts from floodplain encroachment can be fully and appropriately addressed prior to the FEIS, all storm water from the new bridge can be collected and treated with minimal impacts to jurisdictional resources, construction does not involve any dredging, and all wetland impacts can be first avoided and minimized and that adequate compensatory mitigation is found. Compensatory mitigation should be 'in-kind' and within the same hydrologic cataloguing unit.

EPA also believes that Alternative ER2 is a reasonable and feasible alternative and its potential impacts can be addressed through additional avoidance and minimization measures. EPA believes that ER2 should be designated as the environmentally preferred alternative and meets the proposed project's purpose and need by providing the appropriate balance of impacts to the benefits and costs

Mr. Christopher Militscher of my staff will continue to work with you and FHWA and other agencies on the continued environmental coordination activities for this project. Please feel free to contact Mr. Militscher at (919) 856-4206 should you have specific questions concerning EPA's comments.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office

cc: J. Sullivan, FHWA
K. Jolly, USACE
B. Wrenn, NCDENR
G. Thorpe, NCDOT

w/Attachments A and B

Attachment A
DEIS Detailed Review Comments
Mid-Currituck Bridge Study
Currituck and Dare Counties
R-2576

General Comments

The DEIS is presented in a revised format from the recommended format found at 40 CFR Section 1502.10. Page v of the DEIS Preface includes a statement concerning Chapter 3, the Affected Environment and Environmental Consequences and as well as the potential short- and long-term beneficial and adverse effects (if any) of the detailed study alternatives. EPA believes that this major Federal action that could involve the construction of a new bridge and other coastal infrastructure improvements in the cost range of $595.5 million $1,065.1 million will have potential short-term and long-term adverse effects on the natural and human environment. The average cost range of the new bridge alternatives and options appears to be approximately $750 to $800 million based upon the information on Page xxi of the DEIS.

EPA could not find a specific discussion in the DEIS concerning the long-term maintenance costs of a new 7 to 7.5-mile bridge facility over Currituck Sound. Major infrastructure along the Outer Banks and the coastal plain of North Carolina is periodically damaged by severe storms and hurricanes. Maintenance costs associated with the existing project study area roadways and bridges has been expressed by FHWA and NCDOT as a major concern for more than a decade. Shrinking transportation dollars and increased maintenance and repair costs for infrastructure in areas that are very vulnerable to severe weather conditions such as high winds and storm surges and salt air and water should be a very important consideration for decision-makers. NCDOT Division 1 officials have routinely expressed their concerns at other project meetings for maintaining existing roadways and bridges. Adding more than 7 miles of new infrastructure in this area will further strain existing transportation resources.

Pages xii and xiii of the DEIS include other transportation projects proposed in the study area. EPA understood from the NCDOT project management that for R-2545 and R-2544, US 64 including the new bridge over the Alligator River, only the bridge is funded and the 20-miles of widening and new location sections between Columbia and Manteo are currently unfunded. Appendix A, Comments and Coordination does not include copies of specific agency letters following Turnpike Environmental Agency Coordination (TEAC) meetings.

Project Purpose and Need

The DEIS presents three primary project needs, including the need to improve traffic flow in the study area roadways such as US 158 and NC 12, the need to reduce travel time for persons traveling between the Outer Banks and Currituck County mainland, and the need to substantially reduce evacuation times from the Outer Banks. EPA has previously commented on some of the project purpose and need issues during scoping and the Turnpike Environmental Agency Coordination (TEAC) process. EPA continues to have substantial environmental

concerns regarding the documented need for a new crossing of Currituck Sound and the detailed study alternatives (DSAs) presented in the DEIS that include a new bridge. The traffic flow and travel time benefits from a new bridge crossing do not in the long-term outweigh the direct adverse effects to the natural environment, including wildlife, coastal wetlands, and water quality. Table 2-3 of the DEIS attempts to capture some of the travel benefits of the detailed study alternatives of ER2, MCB2 and MCB4 compared to the No-build. In addition, this table also tries to capture the 2035 Hurricane Evacuation Benefit in clearance times between the alternatives.

EPA does not believe that there have been any documented hurricane evacuation problems in this area of the Outer Banks in modern times using the existing roadway system. EPA understands the State's desired goal of reducing hurricane evacuation clearance times to the 18-hour goal. Planning and designing a roadway system based upon this desired goal should be a consideration but not a finite decision point in the preferred alternative selection process. There are other areas of the Outer Banks that potentially cannot meet this 18-hour goal even if a new bridge is constructed over Currituck Sound. EPA in its review of the September 2005 North Carolina Department of Transportation State Hurricane Evacuation Study found only two Category 3 hurricanes in 'modern times' (post 1930) that directly hit the Outer Banks. On September 16, 1933, Hurricane #13 hit the Outer Banks and there were reportedly 21 died, many of whom died from inland flooding. On September 1, 1993, Hurricane Emily resulted in 160,000 persons being evacuated. Two surfers reportedly died from drowning after they apparently refused to evacuate the island.

Other reduced strength hurricanes have historically either brushed near the Outer Banks or made landfall further south in North Carolina and traveled north up the coastal plain towards Virginia. Some of these lesser strength hurricanes caused extensive flooding and storm surge damage along the Outer Banks and in inland areas (e.g. Category 2 Hurricane Isabel on September 18, 2003; only 45% reportedly evacuated from the Outer Banks). Considering that most documented fatalities during hurricanes involve drowning in flooded low-lying areas, transportation agencies should consider other planning initiatives as evacuated persons from the Outer Banks move inland. Many of the evacuation routes in the coastal plain traverse low-lying areas, rivers and streams. During one NCDOT presentation on hurricane evacuation in 2008, NCDOT used hurricane evacuation pictures from Texas (i.e., Hurricane Rita) as the documentation for traffic congestion problems. The September 2005 NCDOT State Hurricane Evacuation Study contains no photographs or other direct evidence of past evacuation problems in North Carolina. EPA does agree that reducing hurricane evacuation clearance times in general is a desirable goal and should be reasonably weighed against other costs, benefits and adverse environmental effects. Local planning and early warning appear to be important components to effective hurricane evacuation, including the consideration of minimizing new development along isolated and remote areas of barrier islands.

The DEIS includes information on the funding of the project and estimated costs on pages xxi and xxii. According to this section, only the toll, new bridge alternatives have a potential to be funded. DSA ER2 cannot be funded through toll revenues or the Public Private Partnership agreement. Furthermore, the $15 million per year provided by the N.C. General Assembly cannot be applied to DSA ER2 per the DEIS, only DSAs MCB2 and MCB4. The

DEIS does not indicate if the N.C. Board of Transportation considers R-2576, Mid-Currituck Bridge Study project to be a priority project under its current priority plans and what funding could be made available for DSA ER2 if it is selected as the preferred alternative. NCTA officials have stated during TEAC meetings that ER2 is not a 'feasible' alternative as it cannot be funded as a toll project.

Detailed Study Alternatives and Options

The DEIS includes DSAs ER2, MCB2 and MCB4 with the following options: MCB2/C1, MCB2/C2, MCB4/C1 and MCB4/C2. Option C1 includes a northern connection and interchange on the barrier island side of Currituck County and Option C2 includes a southern, longer connection and interchange near Albacore Street. Option C2 is actually a 7.5-mile bridge. The DEIS also states that the bridge over Currituck Sound for C1 Option is approximately 7.0 miles in length ((Page 2-10). From past TEAC meetings, there was reference to the new bridge being approximately 5 to 7 miles long. MCB2 provides greater improvements to local roadways and MCB4 provides more limited improvements. The specific improvements under each DSA are included in Section 2 of the DEIS. The A and B designation refers to the mainland approach road options of the new bridge.

EPA recognizes that MCB2 includes the existing road improvements similar to ER2, but the information contained on page xxi of the DEIS is confusing. For example, the range of cost difference between ER2 and MCB2/B/C1 is $416.1 to $523.4 million vs. $800.1 to $970.2 million, respectively. The DEIS does not specifically state the cost of a 7-mile or 7.5-mile bridge. The range of costs for a new bridge might be from $384.0 to $446.8 million. Similarly, the other MCB2 alternatives would indicate that a new 7-mile bridge over Currituck Sound would cost approximately $400 to $500 million dollars. These figures do not correlate well with the information contained in Table 2-4 where the costs are broken down for each DSA. Construction costs for the bridge alternatives under Option A range from $619.3 to $845.7 million, and construction costs for bridge alternatives under Option B range between $513.4 and $726.3 million. These figures exclude mitigation, right of way and utility costs. There is great variability in the actual bridge costs as presented in the DEIS and it is unclear as to the cost differences between Option C1 which is approximately 7.0 miles in length and Option C2 which is 7.5 miles in length. Therefore, EPA requests that the FEIS include clarification as to the actual costs of a new bridge.

Option B would not include a toll plaza at the US 158 interchange and the bridge approach would be placed on fill within Maple Swamp. Option A would place a toll plaza within the US 158 interchange. The mainland approach road would include a bridge over Maple Swamp. Similarly to Options C1 and C2, the costs between these two options are not clearly identified in the DEIS. It is also unclear if the costs for the longer bridge over Maple Swamp under Option A are added to the C1 and C2 lengths.

The DEIS indicates that the new Mid-Currituck Bridge would be a two-lane facility and discusses some of the travel and other considerations on Page 2-17. The difference between a two-lane facility and four-lane facility is estimated at approximately $120 million. The cost estimation details are not included in the DEIS. Superstructure supports, materials, and

construction costs would be expected to be proportionally greater with a four-lane facility. Detailed cost assumptions and estimations should be included in the FEIS.

Human and Natural Environmental Impacts

The DEIS includes a comparison of key impacts in Table S-1 and in other sections of the document. Some of these impact assumptions and categories are not meaningful or have not been shown to be a relevant issue for the comparison of alternatives. For example, outdoor advertising signs are listed as a key impact with 29 signs for ER2 and 6 or 16 signs for the MCB2 or MCB4 alternatives and the respective options. FHWA and NCDOT routinely relocate outdoor advertizing signs for widening and new location projects. The relocation of gravesites is also highlighted as a major difference between the alternatives and a key impact. The relevance of this 'key impact' is not identified in the DEIS.

The residential relocations between the alternatives are generally similar and range between 5 and 8 with 10 vacation rental units. Business relocations are also generally in the same magnitude of impact with between 5 and 8. The summary table also includes impacts with no third outbound lane for hurricane evacuation. The impacts range from 2 to 6 by not including this third lane. The DEIS includes discussions with access changes to neighborhoods and businesses. The access changes appear to be a reasonable expectation considering the scope and magnitude of the proposed improvements.

Total wetland impacts are 7.2 acres, 40.3 acres, 44.9 acres, 42.4 acres, 47.0 acres, 36.6 acres, 41.1 acres, 38.7 acres, and 43.2 acres for Alternatives ER2, MCB2/C1/A, MCB2/C1/B, MCB2/C2/A, MCB2/C2/B, MCB4/C1/A, MCB4/C1/B, MCB4/C2/A and MCB4/C2/B, respectively. The bridge alternatives also have the highest impacts to SAVs with 18.8 acres for MCB2/C1, 23.3 acres for MCB2/C2, 18.8 acres for MCB4/C1 and 23.3 acres for MCB4/C2. Based on the magnitude difference in wetland and other water resource impacts, EPA believes that ER2 is the environmental preferred alternative and appears to be the Clean Water Act Section 404 Least Environmentally Damaging Practicable Alternative (LEDPA).

The impacts to water quality are expected to be very significant. The DEIS does not fully address the fact that water quality in Currituck Sound has declined substantially in the last several decades due to primarily an increase in turbidity and nutrient loading from non-point source runoff. Nursery areas for Blueback herring and Alewife have not been recognized since the 1980's. Coastal marshes around Currituck Sound waters have been lost to erosion or invaded with exotic plant and animal species. In addition to development, other human activities such as agricultural and silviculture have potentially impacted overall water quality in the sound and caused subsequent decline in ecosystem and habitat function. Section 3.3.4.1 addresses aquatic wildlife in Currituck Sound and Section 3.3.4.2 discusses Submerged Aquatic Vegetation (SAV). For purposes of differentiating the impacts between the alternatives, Section 3.3.4.3 is inadequate for fully addressing the magnitude of impacts to water habitat. In addition to the direct loss of SAVs and shading effects, the new bridge pilings would also potentially allow for the introduction of other organisms not typically found in a shallow water estuary. The DEIS states that: "On the other hand, organisms could be attracted to bridge pilings as a reef structure". In the appropriate ecosystem, reef structures can aid and provide potential habitat.

The DEIS does not reference appropriate studies or supporting documentation that bridge pilings would be beneficial to the Currituck Sound ecosystem. Considering the loss of essential fish habitat and other natural functions from past and current human activities, EPA considers additional losses to SAVs to be a critical issue. EPA does not consider runoff from construction, including increased turbidity, siltation and sedimentation in aquatic habitat areas to be a 'minimal' effect. The discussion concerning the impacts from the bridge construction alternatives versus the existing roadway improvements does not provide the public and resource and permitting agencies a reasonable comparison of impacts to aquatic habitat. Shading is expected to impact 14.5 to 17.8 acres of aquatic bottom. Bridge foundations are expected to directly impact 4.3 to 5.5 acres of SAVs. Contrary to the italicized comment at Section 3.3.4, construction impacts may not be temporary but could become permanent considering the existing water quality problems in Currituck Sound.

Section 3.3.4.4 of the DEIS provides more relevant information concerning the potential impacts from noise, turbidity and siltation. The DEIS acknowledges that non-mobile species such as clams could suffer long-term impacts from construction related siltation. However, the DEIS does not adequately assess the issue of recovering populations of benthic organisms after construction is completed or what practicable measures that NCTA would take to minimize turbidity generated during bridge construction. Potential construction techniques of the bridge are discussed in Section 2.4. EPA believes that only the 'top-down' method of construction would be acceptable. Dredging between 53,000 cubic yards and 61,000 cubic yards based upon other proposed methods described in Section 2.4 would not be environmentally-sound. Furthermore, the DEIS does not describe the proposed site suitability and location of dredged spoils. The DEIS does not specifically reference if the potential impacts of 25 or 17 acres to aquatic bottom are included in summary tables. Also, the discussion concerning the approximate 4 acres of impact from the dock construction is not explained fully in reference to the summary impact table.

NCTA and FHWA propose to build the bridge simultaneously from both sides using both US 158 and NC 12 with construction meeting in the middle. Moving large construction equipment and materials via NC 12 would potentially be very disruptive to local residents and have a substantial impact to local traffic. This issue is not discussed in the DEIS.

Alternatives MCB2 and MCB4 involve the construction of the new bridge across Currituck Sound and will traverse Maple Swamp on the mainland side. Maple Swamp is designated as a Significant Natural Heritage Area (SNHA). Option A would involve the bridging of Maple Swamp. Option B would involve filling the wetlands of Maple Swamp. EPA recommends bridging this entire high quality system.

The DEIS addresses different stormwater treatment options from the deck drains for the bridge alternatives. EPA believes that a full collection and treatment system is needed for any of the bridge alternatives. Untreated roadway runoff into Currituck Sound will further degrade this resource that is already stressed from human activities, including residential and commercial development. Bridge drainage options are specifically discussed on Pages 2-25 to 2-27 of the DEIS. EPA strongly recommends Option 1 of the three options identified for collecting and treating bridge drainage. A direct discharge of bridge stormwater through deck drains into

Currituck Sound is not environmentally sound and will continue to accelerate water quality degradation problems.

The discussion concerning invasive species control at Section 3.3.5 is not adequate. The FEIS should cite examples of past successes using NCDOT's Best Management Practices (BMPs) for management of invasive plant species in coastal areas. To EPA's knowledge, there are few or no long-term and cost-effective successes to controlling invasive plants such as Phragmites once they become introduced or established through disruptive activities such as construction. NCDOT's BMPs on such coastal wetland mitigation sites such as Mashoes Road for controlling Phragmites have been very costly and in the long-term ineffective in eliminating this damaging species.

The DEIS very generally discusses borrow site material needed for fill. The DEIS does not address the specific locations of any proposed borrow sites or any impacts associated with these potential locations. For purposes of assessing the potential indirect impacts from borrow sites needed for the proposed project alternatives, the DEIS does not provide adequate details and defers to the final design stages; additional information should be provided in the FEIS.

The DEIS includes consideration for on-site wetlands mitigation by removal of Aydlett Road. However, this compensatory mitigation of potentially 9.1 acres is only being offered for the bridge alternatives that would fill existing Maple Swamp. From direct field observations, there are extensive invasive plant species immediately adjacent to Aydlett Road. The management and control of invasive plant species would need to be thoroughly addressed should this mitigation be pursued at a future date. Compensatory mitigation is also addressed on Pages 3-46 and 3-48 of the DEIS. A conceptual mitigation plan is not included in the DEIS, and should be included in the FEIS.

Floodplain Issues

The DEIS includes statements that the new highway will involve significant encroachment in floodplain areas but it also states that with respect to floodplain highway encroachment, it is the policy of the FHWA to avoid significant encroachment since they would be considered a significant alteration to a water course by Currituck County (Pages 3-74 and 3-75). Page 3-72 states that "should MCB2/B or MCB4B be selected for implementation, additional studies would be conducted during the final design so adverse floodplain impacts....could be avoided or minimized, as well as affects to groundwater hydrology, hydrological characteristics of Maple Swamp, and supported ecological functions". EPA believes that these studies should be completed prior to the issuance of a FEIS. Furthermore, Option A (i.e., Bridging Maple Swamp) should be considered in combination with the removal of Aydlett Road. The floodplain impact is estimated at 22.1 acres on the mainland (Page 3-72). For alternatives MCB2/A and MCB4/A, the impact to the 100-year floodplain would be a total of 10.4 acres. Reference to a project commitment is also made on Page 3-74 with the mitigation measures determination following final design. The DEIS does not provide any suggestion of how these significant floodplain encroachment impacts can be minimized. Considering severe storms and storm surge, the past history of flooding, the accelerated development in the project study area and increases in impervious surfaces, and the potential for sea level rise, any

floodplain encroachment will significantly increase flooding events. EPA does not concur with the statement concerning floodplain impacts for MCB2/A and MCB4/A on Page xxiii.

Sea Level Rise

The DEIS includes a discussion of sea level rise in Section 3.4.4 and defers decisions on road and bridge elevations needed to accommodate potential sea level rise to final design. Raising the grade of the roadways to accommodate sea level rise estimates will increase fill heights and create additional impacts to jurisdictional water resources. EPA does not agree that a Mid-Currituck Bridge would be a useful asset in reducing the impact of sea level rise on the project's area road system. Conversely, bridge alternatives are expected to increase floodplain encroachment with no minimization measures being proposed. Sea level rise will only exacerbate flooding and storm surge issues. The statement that a Mid-Currituck Bridge could 'stay in service up to 75 years', is not reasonable nor is there a reference to other similar bridge structures in the coastal plain that have lasted that period of time without significant repairs or replacement. EPA does not concur with the suggestion that a breach in the island at the Currituck/Dare County line could be addressed through a new bridge and the conclusions of this section of the DEIS do not appear to be adequately supported by the documentation.

Fish and Wildlife Impacts

EPA defers specifically to the U.S. Fish and Wildlife Service, N.C. Wildlife Resources Commission and other resource agencies concerning the potentially significant impacts to fish and wildlife. EPA concurs fully with the comments contained in the May 25, 2010, letter from the U.S. Department of Interior to NCTA and the May 21, 2010, memorandum from the N.C. Wildlife Resources Commission to Ms. Melba McGee, NCDENR. Only alternative ER2 does not represent a significant impact to fish and wildlife resources, including aquatic organisms and fish, migratory birds, and terrestrial species. The discussion contained in the summary impacts table is not a reasonable representation of the differences in the impacts between the alternatives. The bridge alternatives represent a major or severe impact to wildlife species, including direct impacts from habitat loss, habitat fragmentation and indirect and cumulative effects. Inaccuracies concerning endangered and threatened species should be addressed in the FEIS.

Farmland Impacts

The DEIS describes the potential impacts to farmlands in Section 3.1.12. The discussion is not based upon an actual full analysis and determination of prime, unique and State and locally important farmlands under Title 7 Code of Federal Regulations (CFR) Part 658 but on soil types. The assessment did not include completed Form AD-1006 or Form NRCS-CPA-106. MCB2/A and MCB4/A would affect approximately 37 acres of prime farmland soils and 72 acres of State and locally important farmland soils. MCB2/B and MCB4/B would impact approximately 76 acres of prime farmland soils and 41 acres of State and locally important farmland soils. The DEIS does not provide a relevant discussion of North Carolina's initiatives in protecting farmlands from continued losses to development. The DEIS does not address if Currituck County is participating in the Voluntary Agricultural District (VAD) program. The DEIS does not indicate if these potential farmland losses will impact the specific operations of current

agriculture and what economic impact that may result. The DEIS on Page 3-19 does reference another 2009 report that includes a copy of the Farmland Conversion Impact Rating form CPA-106. Table S-1 Comparison of Key Impacts does not include any specific farmland impact category. Continued farmland losses in North Carolina is an important socio-economic issue and the DEIS attempts to categorize the potential loss from this proposed project as being inconsequential (e.g., "....this is less than 0.01 percent of all farmland soils in Currituck County".).

Indirect and Cumulative Impacts

EPA has previously expressed concerns for the indirect and cumulative impacts from the proposed bridge alternatives. The DEIS discusses indirect and cumulative effects in Section 3.6. EPA continues to have environmental concerns for the proposed project bridge alternatives. The statement contained in summary impact table on Page xx includes the desire by Currituck County that the bridge alternatives are desired because the potential development at the bridge's interchange and along US 158. There are significant wetland areas and other low-lying floodplain areas where this development is desired. Referencing Page 3-88 of the DEIS, EPA does not concur with the statement concerning the type and density of development compared to the 'No-build alternative' and the bridge alternatives. 'The lack of transportation improvements and its constraint on development' statement included on Page 3-89 is not accurate or supported by actual development facts. This area has been developing at an accelerated pace until the major economic down turn in 2009. This has been occurring for more than a decade and without any transportation improvements and with some seasonal congestion. EPA does not agree with the assessment of potential development in the Carova area. The FEIS should address these issues further.

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment